What is claimed is:

1. An exercise equipment support unit for attachment to a vehicle receiver hitch comprising:

(i) a mount shank receivable in an end of the receiver tube of a receiver hitch;

(ii) a device on said mount shank for applying tension or force between said mount shank and said receiver tube; and

(iii) means for applying a force to said mount shank and said receiver hitch beyond said end of said receiver tube, whereby movement of said mount shank within said receiver tube is prevented.

2. The support unit of claim 1, wherein said means for applying a force to said mount shank is selected from the group consisting of a bolt, a collar, a screw, a moveable flange, a knob, a wing nut, and the like.

3. A support system for attaching an exercise apparatus to a vehicle, comprising:

(i) support having first and second ends, with the first end of said support being configured for attachment to the vehicle such that said support extends generally horizontally from said vehicle;

(ii) a member connected toward the second end of and extending upwardly from said support; and

(iii) an apparatus supported toward a free end of said member to facilitate attachment of an exercise apparatus thereto, with said apparatus extending upwardly from and at an angle ranging between about 30° and about 90° relative to said support, said apparatus including a mounting mechanism configured to permit attachment of the exercise apparatus thereto.

4. The support system according to claim 3 wherein said support includes first and second parts arranged in telescopic relation relative to each other whereby allowing the exercise apparatus to be positioned at different distances from the vehicle.

5. The support system according to claim 4 wherein said support further includes an attachment mechanism for releasably attaching said first and second parts in a variety of selected linear positions relative to each other to effect the operative length of said support.

6. The support system according to claim 3 wherein said member is fixedly attached to and extends from said support.

7. A support system for releasably mounting exercise equipment to a receiver hitch mounted on a rear end of a vehicle, said support system comprising:

(i) a support defining an elongated axis between inner and outer ends, with the inner end of said support being configured for releasable attachment to the receiver hitch on the vehicle such that said support extends generally horizontally from the vehicle;

(ii) a member arranged toward the outer end of and extending upwardly and away from said support, and wherein an axis of said member and the elongated axis of said support define an included angle ranging between about 30° and about 90° therebetween; and

(iii) an exercise mounting apparatus arranged toward a free upper end of said member to permit selective positioning of exercise equipment thereon.

8. The support system according to claim 7 wherein said support includes first and second elongated pieces arranged in telescopic relation relative to each other.

9. The support system according to claim 8 wherein said support further includes an attachment mechanism for releasably attaching the first and second pieces of said support in a variety of selected linear positions relative to each other to effect the operative length of said support.

10. The support system according to claim 8 wherein the first piece of said support has a free end selectively attachable to the receiver hitch on said vehicle.

11. The support system according to claim 7 wherein said exercise mounting apparatus and said member are adjustably interconnected to each other whereby allowing said exercise mounting apparatus to be vertically adjustable relative to said support.

12. A support system for releasably mounting exercise equipment to a receiver hitch mounted on a rear end of a vehicle, said support system comprising:

(i) a support defining an axis between inner and outer ends, with the inner end of said support being configured for releasable attachment to the receiver hitch on the vehicle such that said support extends generally horizontally from the vehicle;

(ii) a member defining an elongated axis, with said member being arranged toward the outer end of and extending upwardly and away from said support, and wherein the elongated axis of said member and the axis of said support defining an included angle ranging between 30° and about 90° therebetween; and

(iii) an exercise equipment mounting apparatus adjustably securable toward a free upper end of said member, said exercise equipment mounting apparatus being both pivotal about and movable along the elongated axis of said member with said exercise equipment mounting apparatus further including a mounting mechanism which is adjustable about an axis extending generally traverse to said member to further facilitate leveling of said exercise equipment.

13. The support system according to claim 12 wherein said support includes first and second elongated pieces arranged in telescopic relation relative to each other.

14. The support system according to claim 13 wherein said support further includes an attachment mechanism for releasably attaching the first and second pieces of said support in a variety of selected linear positions relative to each other to effect the operative length of said support.

15. A support unit for attachment to a vehicle receiver hitch, comprising:

(i) an insert for assuming a telescoping relationship along a longitudinal axis of the receiver hitch;

(ii) an attachment base supported by said insert;

(iii) a locking member which locks said insert from longitudinal release from the telescoping arrangement; and

(iv) stabilizing means for limiting wobble potential between said insert and the receiver hitch.

16. The support unit of claim 15 wherein said attachment base includes exercise equipment attachment means.

17. The support unit of claim 16 wherein said exercise equipment attachment means includes a sleeve for receiving a component of exercise equipment.

18. The support unit of claim 16 wherein said attachment base includes a swing member and a swing angle adjuster.

19. The support unit of claim 18 wherein said swing member includes attachment means for attaching a component of an exercise device.

20. The support unit of claim 15 wherein said stabilizer means includes means for adjusting a contact relationship between said insert and receiver hitch and retaining that contact level until release of said stabilizing means.

21. The support unit of claim 20 wherein said stabilizer means functions to place and retain a surface of the insert in flush contact with the receiver hitch.

22. The support unit of claim 21 wherein said stabilizing means further produces and retains a tensioning or compression force on the insert relative to the locking member.

23. The support unit of claim 20 wherein said stabilizer means functions to tilt said insert within the receiver hitch and retain a resultant contact relationship.

24. The support unit of claim 23 wherein said stabilizing means further produces and retains a tensioning or compression force on the insert relative to the locking member.

25. The support unit of claim 20 wherein said stabilizing means produces and retains a tensioning or compression force on the insert relative to the locking member.

26. The support unit of claim 25 wherein said insert has locking member reception apertures that are non-circular.

27. A method of assembling an exercise equipment support unit for attachment to a vehicle receiver hitch, including:

(i) providing an insert designed for assuming a telescoping relationship with the receiver hitch;

(ii) providing an attachment base for supporting exercise equipment;

(iii) providing a locking member for precluding complete telescope release between the receiver hitch and insert; and

(iv) providing stabilizing means for reducing a level of freedom of play in movement between the telescoping insert and receiver hitch.

28. An exercise equipment mount, for attachment to a receiver hitch, comprising:

(i) an insert dimensioned for assuming a telescoping relationship with the receiver hitch;

(ii) an attachment base which supports exercise equipment in use and is connected to or integrated with said insert;

(iii) a locking member which is received by the insert and receiver hitch to prevent full telescopic release of said insert from the receiver hitch; and

(iv) a stabilizer, which includes an engager that is adjustable from a first position to a second position with the second position preventing to a greater extent freedom of relative movement between said insert and the receiver hitch.

29. The mount of claim 28 further comprising an exerciser attachment means supported by said insert.

30. The mount of claim 29 further comprising exerciser equipment supported by said attachment base.

31. The mount of claim 28 wherein said adjustment base includes means for swing adjustment of said base relative to said insert.

32. The mount of claim 28 wherein said locking member is a locking pin and said insert includes a tear shaped locking pin reception aperture.

33. An insert for use with a hitch mount, comprising a multi-sided tubular member with a pair of aligned tear drop shaped locking pin reception apertures.